

REMARKS

Entry of the amendments is respectfully requested. Claims 1, 3, 7, 10, 13, 14, and 16-18 have been amended. Claims 1-20 are pending in the application. Favorable reconsideration and allowance of this application is respectfully requested in light of the foregoing amendments and the remarks that follow.

1. Amendments to the Specification

The specification has been amended to correct minor typographical errors found upon a review of the application. Specifically, "wheel 64, 64a, and 64b" has been replaced with "wheel 65, 65a, and 65b," respectively, as reference numeral 64 was is used to identify "mobile support."

Error Noted in Published Application

In the published application on page 2, paragraph [0029], line 6, the numeral "5" precedes "horizontal". It appears that when the application was scanned for publication, the line number was inadvertently scanned into the printed publication and should now be deleted.

2. Proposed Amendment to the Drawings

Figs. 1-4 have been amended to correctly identify the wheel as 65, 65a, and 65b.
Fig. 6 has been amended to add reference numeral 74 to identify the worm gear drive, as this reference numeral was inadvertently omitted from the drawing.

3. Claim Objections

Claims 1 and 13 stand objected to because of an informality. The claims have been amended as suggested by the Examiner to delete "a" before "having."

4. Rejection Under §112, Second Paragraph

Claim 10 stands rejected under 35 U.S.C. §112, ¶2. The claim has been amended as suggested by the Examiner to replace "machine" with "gantry." Withdrawal of this rejection is requested.

5. Rejections Based on the Prior Art

a. Recapitulation of the Invention¹

The invention relates to a triangulated gantry includes a front ground-supported boom positioned laterally between and longitudinally remote from left and right rear ground-supported booms of the machine. The booms are functionally interconnected by

¹ This Section 5a is intended to provide the Examiner with some background information on the state of the art and applicant's contribution to it. It is *not* intended to distinguish specific claims from the prior art. That task is performed in Section 5b-5c below.

a system of horizontal beams that may form an at least generally triangular shape when viewed in top plan. The horizontal beams are raisable with coordinated lifting of the booms to lift a load. The resultant gantry is extremely stable and extremely maneuverable when compared to traditional four boom gantries. Maneuverability may be enhanced further by configuring each of the bases of the booms so as to be steerable through an angle of at least 360° with respect to the remainder of the boom. One or more of the horizontal beams may be extendible and retractable to increase and reduce the size of the footprint of the machine, permitting the machine to maneuver towards a load through tight spaces and to subsequently expand to straddle the load.

b. The Rejection of Claims 1, 2, 10, 11, and 17 and Under § 102(b)

Claims 1, 2, 10, 11, and 17 stand rejected under § 102(b) as being anticipated by U.S. Patent No. 3,900,077 to Gee. The Applicant respectfully traverses this rejection because, as is discussed below, the Gee patent does not disclose each and every element of the novel subject matter disclosed and set forth in amended claims 1 and 17. Therefore, reconsideration is in order and is respectfully requested.

Gee discloses a vehicle 1 for surf zone work. The vehicle 1 includes a platform 10, a plurality of at least three, spaced, depending legs 12, each having a traction unit 14 associated with the lower end thereof. (col. 2, lines 59-66). The legs 12 are telescopic structures, a second leg element 34 being slidable upon a first leg element 32 whereby the

effective length of each leg 12 may be changed to allow the vehicle platform 10 to remain in a substantially horizontal position even though the individual legs 12 are disposed in differing depths. (col. 3, lines 32-45).

Claim 1 has been amended to require "(B) a plurality of horizontal beams that functionally interconnect said lift legs and that are raisable with coordinated lifting of said first, second, and third booms to lift a load."

As noted above, the legs 12 of the Gee vehicle 1 are telescopic. However, there is no disclosure in Gee of horizontal beams that "are raisable with coordinated lifting of said first, second, and third booms to lift a load," as amended claim 1 requires. Instead, each leg 12 includes a cylinder 46 that permits limited movement of a lower leg element 34 relative to an upper leg element 32 to accommodate variations in ground topography. The leg element 32 is not raisable relative to the leg element 34 to raise horizontal beams to lift a load, as amended claim 1 requires. Loads are instead lifted using separate "work performing means" in the form of a boom 26 and a clam shell bucket located on top of the platform 10. The resultant machine is not a gantry. Its overhead boom 22 also renders it poorly suited for indoor and other applications in which gantries are often used. Thus, amended claim 1 is not anticipated by Gee.

Furthermore, one skilled in the art would not be motivated to modify Gee such that its horizontal beams would be raisable with coordinated lifting of its legs 12. This is because if the Gee vehicle 1 were so modified, then the Gee vehicle 1 would not be

Serial No. 10/080,982 - Johnston
Art Unit: 3652 – Docket 1266.015
Response to Office Action dated October 6, 2003
Page 18 of 24

operable for its intended purpose of being able to accommodate variations in ground topography while the platform 10 remains in a substantially horizontal position. Because the proposed modification would render the prior art invention to be modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984); see also MPEP §2143.01.

Dependent claims 2, 10, and 11 are believed to be in condition for allowance for incorporating by reference the limitations of claim 1 and for defining additional features of the invention, which, when considered in combination with those of claim 1, are not disclosed by the prior art relied upon in the rejection. For example, claim 11 further requires "wherein each of said mobile bases comprises a wheel." This additional requirement is not found in Gee.

Independent claim 17 has been amended to require "(C) vertically extending said first, second, and third booms to raise said first, second, and third horizontal beams and to lift said load." As should be clear from the discussion of claim 1, Gee does not disclose this step.

In light of the amendments and the foregoing arguments, withdrawal of the rejection of claims 1, 2, 10, 11, and 17 is requested.

c. The Rejection of Claims 1, 2, 9-13, 17, and 20 Under § 103

The rejection of claims 1, 2, 9-13, 17, and 20 as unpatentable over U.S. Patent No. 4,397,370 to Smith in view of U.S. Patent No. 6,017,181 to Johnston is respectfully traversed, because, *inter alia*, there is no teaching or suggestion to combine or modify the references to produce the claimed invention. MPEP §2143.01. Furthermore, even if the references were combined, the invention would not result. The Examiner correctly recognizes that Smith fails to show that the vertical lift leg is extendible and cites Johnston to cure this deficiency.

Smith discloses a complete surf service vehicle 10 in a mobile attitude adapted to traverse a bottom surface 11 of a body of water 12 beneath a water surface 13 to transport loads to and from offshore oil rigs. The vehicle consists primarily of a substantially horizontal frame 14 carried by three legs, namely, a forward leg 15 and two aft legs 16 and 17 in a tricycle arrangement. At the bottom of the forward leg 15 is a rolling assembly 18, which is steerable. Rolling assemblies 19 and 20 for the aft legs 16 and 17, respectively, are relatively fixed. (col. 2, lines 40-50). As the Examiner acknowledges, Smith fails to show that the vertical lift leg is extendible. That is, the Smith vehicle 10 does not lift and is not a gantry.

Johnston discloses a cask transporter system 10 includes a gantry 12, a platform 14 and two parallel tread mechanisms 16. The gantry 12 is mounted on the platform 14,

which is supported on the tread mechanisms 16. The gantry 12 includes two extendible boom assemblies 20, a beam 22 and a restraining system 24. (col. 2, lines 17-26).

A hydraulic cylinder 40 is connected to an outer support section 32 and is disposed within an inner telescoping section 34 of each boom assembly 20. (col. 2, lines 50-52). The inner telescoping section 34 in each boom assembly 20 is extended under power from the hydraulic cylinder 40 when the pressurized fluid is directed through the valve 46 to the hydraulic cylinder 40. The ram 52 of the hydraulic cylinder 40 extends upward to contact the upper plate 54 of the inner telescoping section 34, thereby extending the inner telescoping section 34 as well. (col. 2, line 63 to col. 3, line 3).

Claim 1 requires that each boom comprises a vertically extendible lift leg. As the Examiner recognizes, Smith fails to show a vertical lift leg that is extendible and cites Johnston to cure this deficiency. However, unequivocal statements in Smith teach strongly away from the proposed modification. Smith specifically states that the tricycle arrangement improves stability such that a spring mounting is not required and "none of the legs need to be vertically adjustable." (col. 2, lines 54-55). Thus, Smith teaches away from the proposed combination of references as it leaves the impression that the vehicle would not have the property sought by the applicant. *In re Caldwell*, 319 F.2d 254, 256, 138 USPQ 243, 245 (C.C.P.A. 1963). Further, "It is improper to combine references where the references teach away from their combination." MPEP 2145 (citing *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983)).

In addition, Smith, like Gee, is *not* a gantry. As such, its platform or frame 14 is designed only to support the main working structure of the machine and is not itself designed to be raised and lowered to lift a load. Since Smith relates neither to applicant's field of endeavor (gantries) nor to the problems addressed and solved by the invention (maneuvering a gantry through tight spaces), Smith constitutes nonanalogous art which would not have been considered by one skilled in the art when determining whether or not the invention is obvious. See MPEP 2141.01(a). At a minimum, the vast differences between Smith and Johnston (or any other prior art relating to gantries, for that matter), would have counseled strongly against converting Smith to a gantry.

Dependent claims 2 and 9-12 are believed to be in condition for allowance for incorporating by reference the limitations of claim 1 and for defining additional features of the invention, which, when considered in combination with those of claim 1, are neither taught nor suggested by the prior art relied upon in the rejection. For example, claim 9 further requires "wherein each of said first and second beams has multiple mounting points in the vicinity of said second and third booms, respectively, for selectively receiving an associated end of said third beam at one of a plurality of discrete mounting locations." Smith, alone or in combination with Johnston, fails to teach or suggest such beams.

In addition to reciting the above-cited features of claim 1, claim 12 also requires that each of the bases rotatable through an angle of 360° relative to the associated lift leg.

Smith, alone or in combination with Johnston, fails to teach or suggest such rotatable bases. For instance, referring to Fig. 5, each of Smith's rear rolling assemblies 19 and 20 includes an axle 77 that supports a wheel 78 in a pivotally fixed relationship relative to the associated leg 15 or 16. The resulting machine is less versatile than applicant's claimed machine. Independent claim 13 is allowable for the at least generally the same reason.

Independent claim 17 requires, *inter alia*, "(C) vertically extending said first, second, and third booms." As should be clear from the discussion of claim 1, it would not have been obvious to modify the Smith vehicle to perform this step because Smith specifically teaches away from having an extendible leg. Accordingly, claim 17 is non-obvious in light of the teachings of Smith and Johnston.

Dependent claim 20 is believed to be in condition for allowance for at least the reasons that claim 17, from which it depends, is believed to be allowable. In addition, claim 20 requires "wherein each of said booms includes a base and a lift leg mounted on said base, and further comprising steering said vehicle by rotating the base of at least one of said booms through an angle of at least 360° with respect to the associated lift leg." As noted above with respect to claim 13, both Smith and Johnston fail to teach or suggest this further limitation.

In light of the foregoing, withdrawal of the rejection of claims 1, 2, 9-13, 17, and 20 is respectfully requested.

Serial No. 10/080,982 - Johnston
Art Unit: 3652 – Docket 1266.015
Response to Office Action dated October 6, 2003
Page 23 of 24

6. Allowable Subject Matter

The applicant gratefully acknowledges the indication that claims 3-8, 14-16, 18, and 19 would be allowable if rewritten in independent form to include all of the limitations in the base claim and any intervening claims. Claims 3, 7, 14, 16, and 18 have been so rewritten. The remaining claims depend from one of these claims. Therefore, all of claims 3-8, 14-16, 18, and 19 are believed to be in condition for allowance.

CONCLUSION

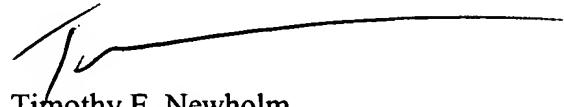
It is submitted that the claims are in compliance with 35 U.S.C. §§ 112, 102, and 103 and each define patentable subject matter. A Notice of Allowance is therefore respectfully requested.

A check in the amount of \$215 in payment of the fee by a small entity for submission of five independent claims is enclosed. No additional fee is believed to be payable with this communication. Nevertheless, should the Examiner consider any other fees to be payable in conjunction with this or any future communication, authorization is given to direct payment of such fees, or credit any overpayment to Deposit Account No. 50-1170.

Serial No. 10/080,982 - Johnston
Art Unit: 3652 – Docket 1266.015
Response to Office Action dated October 6, 2003
Page 24 of 24

The Examiner is invited to contact the undersigned by telephone if it would help expedite matters.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Timothy E. Newholm', with a long horizontal flourish extending to the right.

Timothy E. Newholm
Registration No. 34, 400

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BOYLE FREDRICKSON NEWHOLM
STEIN & GRATZ S.C.
250 Plaza, Suite 1030
250 East Wisconsin Avenue
Milwaukee, WI 53202
Telephone: (414) 225-9755
Facsimile: (414) 225-9753
Customer No.: 23598